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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/823,516

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Christopher Warren

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24314 7590 12/29/2006  
JANSSON, SHUPE, MUNGER & ANTARAMIAN, LTD  
245 MAIN STREET  
RACINE, WI 53403

EXAMINER

FIGUEROA, ADRIANA

ART UNIT

PAPER NUMBER

3637

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

12/29/2006

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

# Office Action Summary

Application No.

10/823,516

Applicant(s)

WARREN, CHRISTOPHER

Examiner

Adriana Figueroa

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 16 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 9-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 9-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claim 13 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In line 1 recites the limitation " adjacent pre-coated silica sand particles" it is unclear if this limitation refers to "the pre-coated silica sand particles" of claim 12 or is a new element.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 9, 15, 19, 20, 23, 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Severance (US 4,265,957) in view of Bolgiano (US 4,781,987) and further in view of Bogan (US 4,701,481).

Regarding claim 9, Severance discloses a material having a first layer including a porous concrete floor and an epoxy resin (Column 3, Lines 11-14, Lines 31-33). It is well known in the art that silica sand is a major ingredient of concrete and that phenolic resin is a thermosetting resin. Therefore, it would have been obvious to a person having

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ordinary skill in the arts at the time of the applicant's invention to modify the first layer of Severance to include silica sand and a phenolic resin in order to provide a wear resistance surface.

Severance discloses a second layer overlying the first layer, said second layer including an epoxy resin which is an aliphatic polymer (Column 4, Line 40) but does not disclose a resilient material. However, Bolgiano teaches a layer having a resilient material (Column 14, Line 24). Therefore, it would have been obvious to a person having ordinary skill in the arts at the time of the applicant's invention to modify the second layer of Severance to have a resilient material as taught by Bolgiano in order to provide a surface that will deform in response to the application of physical stresses on the surface covering.

Severance discloses a third layer overlying the second layer, said third layer including an epoxy resin which is an aliphatic polymer and silica sand (Column 5, Lines 7-8, 20-25). Severance does not disclose the third layer including silica flour. However, Bogan teaches a layer including silica flour (Col 3, Lines 37-39). Therefore, it would have been obvious to a person having ordinary skill in the arts at the time of the applicant's invention to modify the third layer of Severance to include silica flour as taught by Bogan in order to provide moisture resistance.

Regarding claim 15, Severance modified by Bolgiano and Bogan discloses the aliphatic material of the second layer comprises an epoxy (Column 4, Line 40).

Regarding claim 19, Severance modified by Bolgiano and Bogan discloses the second layer has a thickness of about 20- 30 mils (Column 5, Lines 3-4).

Regarding claim 20, Severance modified by Bolgiano and Bogan discloses the aliphatic material of the third layer comprises an epoxy (Column 5, Line 7).

Regarding claim 23, Severance modified by Bolgiano and Bogan discloses the third layer has a thickness of about 40-60 mils (Column 5, Lines 12-13).

Regarding claim 24, Severance modified by Bolgiano and Bogan discloses a fourth layer overlying the third layer, said fourth layer including a polyurethane resin which is equivalent to a clear aliphatic polymer (Column 5, Lines 59-60).

3. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Severance (US 4,265,957) in view of Bolgiano (US 4,781,987), Bogan (US 4,701,481) and further in view of Britt (US 2003/0156901). Severance modified by Bolgiano and Bogan discloses as discussed above but does not disclose the phenolic resin being present in an amount of about 3 to 5 percent by weight of the silica sand of the first layer. However, Britt teaches a composition having a thermoplastic polymer from about 1-10 weight percent and nonreinforcing mineral particles from about 20-80 percent (Page 2, Paragraph 14). In addition, Britt teaches that the nonreinforcing mineral particles can be silica (Page 2, Paragraph 22, Line 9) and it is known that the phenolic resin is a polymer. The weight percent of these materials can be varied within the ranges taught by Britt to obtain the ratio of phenolic resin of about 3 to 5 percent by weight of the silica sand. Therefore, it would have been obvious to a person having ordinary skill in the arts at the time of the applicant's invention to modify the amount of phenolic resin of Severance, Bolgiano and Bogan to be present in an amount of about 3 to 5 percent by

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weight of the silica sand as taught by Britt in order to provide a strong resistance to abrasion when used in heavy traffic areas.

4. Claims 10, 12, 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Severance (US 4,265,957) in view of Bolgiano (US 4,781,987), Bogan (US 4,701,481) and further in view of Chen (US 6,228,463).

Regarding claim 10, Severance modified by Bolgiano and Bogan discloses as discussed above but does not disclose the silica sand of the first layer having a particle size of about 60 mesh. However, Chen teaches the silica sand of the first layer having a particle size of about 60 mesh (Column 4, Lines 20-24). Therefore, it would have been obvious to a person having ordinary skill in the arts at the time of the applicant's invention to modify the first layer of Severance, Bolgiano and Bogan to include silica sand particles of about 60 mesh as taught by Chen in order to improve the wear resistance.

Regarding claim 12, Severance modified by Bolgiano and Bogan discloses as discussed above but does not disclose the silica sand of the first layer being pre-coated with the phenolic resin. However, Chen teaches the silica sand of the first layer being pre-coated with the phenolic resin (Column 4, Lines 54-55). Therefore, it would have been obvious to a person having ordinary skill in the arts at the time of the applicant's invention to modify the silica sand of Severance, Bolgiano and Bogan to be pre-coated with the phenolic resin as taught by Chen in order to prevent the settling of the particles.

Regarding claim 14, Severance modified by Bolgiano, Bogan and Chen disclose as discussed in claim 13, but does not disclose the second layer further comprising a catalyst. However, Bolgiano teaches a second layer further comprising a catalyst (Columnn 14, Lines 31-34). Therefore, it would have been obvious to a person having ordinary skill in the arts at the time of the applicant's invention to modify the second layer of Severance, Bolgiano, Bogan and Chen to include a catalyst as taught by Bolgiano in order to improved the stain and scratch resistance.

5. Claim13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Severance (US 4,265,957) in view of Bolgiano (US 4,781,987), Bogan (US 4,701,481), Chen (US 6,228,463) and further in view of Becker (US 4,791,015). Severance modified by Bolgiano, Bogan, Chen discloses as discussed in claim 12, but does not disclose the adjacent pre-coated silica sand particles being fused together by the phenolic resin. However, Becker teaches the use of various particles including glass and ceramics (Column 5, Lines 40-42) with the heat activated thermosetting resin (Column 5, Lines 43-48). Therefore, it would have been obvious to a person having ordinary skill in the arts at the time of the applicant's invention to modify the first layer of Severance, Bolgiano, Bogan and Chen to have the adjacent pre-coated silica sand particles being fused together by the phenolic resin as taught by Becker in order to activate the adhesive to assure bonding between the particles.

6. Claims 16, 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Severance (US 4,265,957) in view of Bolgiano (US 4,781,987), Bogan (US 4,701,481) and further in view of Blom (US5, 183,438).

Regarding claims 16 and 17, Severance modified by Bolgiano and Bogan discloses as discussed in claim 15, but does not disclose the resilient material of the second layer comprising one of an elastomer and a flexibilizer. However, Blom teaches a second layer including an elastomer comprising rubber (Column 2, Line 34).

Therefore, it would have been obvious to a person having ordinary skill in the arts at the time of the applicant's invention to modify the second layer of Severance, Bolgiano and Bogan to include an elastomer comprising rubber as taught by Blom in order to lower the risk of injury when used as a sports floor.

7. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Severance (US 4,265,957) in view of Bolgiano (US 4,781,987), Bogan (US 4,701,481), Blom (US5, 183,438) and further in view of Verret (WO 00/50707). Severance modified by Bolgiano, Bogan and Blom discloses as discussed above, but does not disclose the rubber comprising rubber particles having a particle size of about 60 mesh. However, Verret teaches a layer comprising rubber particles having a particle size of about 60 mesh (Abstract, Line 2). Therefore, it would have been obvious to a person having ordinary skill in the arts at the time of the applicant's invention to modify the rubber particles of Severance, Bolgiano, Bogan and Blom to have rubber particles having a particle size of about 60 mesh as taught by Verret in order to provide an acoustic effect.



8. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Severance (US 4,265,957) in view of Bolgiano (US 4,781,987), Bogan (US 4,701,481) and further in view of Gibbons (US 3,928,706). Severance modified by Bolgiano and Bogan discloses as discussed in claim 9 but does not disclose the third layer further comprising colored quartz particles distributed therein. However, Gibbons teaches a layer having colored quartz particles (Column 3, Lines 2-3, Lines 35-40). Therefore, it would have been obvious to a person having ordinary skill in the arts at the time of the applicant's invention to modify the third layer of Severance, Bolgiano, Bogan to include colored quartz particles as taught by Gibbons in order to provide a decorative effect.

9. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Severance (US 4,265,957) in view of Bolgiano (US 4,781,987), Bogan (US 4,701,481), Gibbons (US 3,928,706) and further in view of Miller (US 4,504, 523). Severance modified by Bolgiano, Bogan and Miller discloses as discussed in claim 21 but does not disclose the colored quartz particles having a particle size of about 28 mesh. However, Miller teaches a layer including quartz particles having a particle size of about 28 mesh (Column 1, Lines 57-62). Therefore, it would have been obvious to a person having ordinary skill in the arts at the time of the applicant's invention to modify the third layer of Severance, Bolgiano, Bogan and Gibbons to include quartz particles having a size of 28 mesh as taught by Miller in order to provide a decorative appearance.

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10. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Severance (US 4,265,957) in view of Blom (US5, 183,438), Bogan (US 4,701,481) and further in view of Blom (US5, 183,438). Severance discloses a material having a first layer including a porous concrete floor and an epoxy resin (Column 3, Lines 11-14, Lines 31-33). It is well know in the art that silica sand is a major ingredient of concrete and that phenolic resin is a thermosetting resin. Therefore, it would have been obvious to a person having ordinary skill in the arts at the time of the applicant's invention to modify the first layer of Severance to include silica sand and a phenolic resin in order to provide a wear resistance surface.

Severance discloses a second layer bonded to the first layer, said second layer including an epoxy resin (Column 4, Line 40) but does not disclose elastomeric particles. However, Blom teaches a second layer including an elastomeric particles (Column 2, Line 34). Therefore, it would have been obvious to a person having ordinary skill in the arts at the time of the applicant's invention to modify the second layer of Severance to include elastomeric particlesas taught by Blom in order to lower the risk of injury when used as a sports floor.

Severance discloses a third layer overlying the second layer, said third layer including epoxy resin and silica sand (Column 5, Lines 7-8, 20-25). Severance does not disclose the third layer including silica flour. However, Bogan teaches a layer including silica flour (Col 3, Lines 37-39). Therefore, it would have been obvious to a person having ordinary skill in the arts at the time of the applicant's invention to modify the third

layer of Severance to include silica flour as taught by Bogan in order to provide moisture resistance.

11. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Severance (US 4,265,957) in view of Blom (US 5, 183,438), Bogan (US 4,701,481) Blom (US 5, 183,438) and further in view of Chen (US 6,228,463). Severance modified by Bolgiano, Bogan and Blom discloses as discussed above but does not disclose the silica sand of the first layer being pre-coated with the phenolic resin. However, Chen teaches the silica sand of the first layer being pre-coated with the phenolic resin (Column 4, Lines 54-55). Therefore, it would have been obvious to a person having ordinary skill in the arts at the time of the applicant's invention to modify the silica sand of Severance, Bolgiano, Bogan and Blom to be pre-coated with the phenolic resin as taught by Chen in order to prevent the settling of the particles.

12. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Severance (US 4,265,957) in view of Blom (US 5, 183,438), Bogan (US 4,701,481), Blom (US 5, 183,438) and further in view of Gibbons (US 3,928,706). Severance modified by Bolgiano, Bogan and Blom discloses as discussed in claim 25 but does not disclose the third layer further comprising colored quartz particles distributed therein. However, Gibbons teaches a layer having colored quartz particles (Column 3, Lines 2-3, Lines 35-40). Therefore, it would have been obvious to a person having ordinary skill in the arts at the time of the applicant's invention to modify the third layer of Severance,

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Bolgiano, Bogan to include colored quartz particles as taught by Gibbons in order to provide a decorative effect.

13. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Severance (US 4,265,957) in view of Blom (US 5, 183,438), Bogan (US 4,701,481), Blom (US5, 183,438). Severance modified by Bolgiano, Bogan and Blom discloses a fourth layer overlying the third layer, said fourth layer including a polyurethane resin which is equivalent to a clear aliphatic polymer (Column 5, Lines 59-60).

### ***Response to Arguments***

14. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Corder (US 6,399,181) teaches a protective layer including a rubber surface and a thermosetting epoxy resin material with a catalyst. Ott (US 4,945,697) teaches a layer comprising granulated rubber. Bondoc (US 4,373,992) teaches a composition having silica sand, silica flour and a polymer.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Adriana Figueroa whose telephone number is 571-272-8281. The examiner can normally be reached on Monday-Friday 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lanna Mai can be reached on 571-272-6867. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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12/22/06

LANNA MAI  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3600

